

Applicant: Friedrich BOECKING
Docket No. R.306611
Preliminary Amdt.

AMENDMENTS TO THE SPECIFICATION:

Page 1, please add the following new paragraphs before paragraph [0001]:

[0000.2] CROSS-REFERENCE TO RELATED APPLICATIONS

[0000.4] This application is a 35 USC 371 application of PCT/EP 2004/052980 filed on November 16, 2004.

[0000.6] BACKGROUND OF THE INVENTION

Please replace paragraph [0003] with the following amended paragraph:

[0003] Description of the Prior Art

Page 3, please replace paragraph [0007] with the following amended paragraph:

[0007] ~~Summary of the Invention~~

SUMMARY AND ADVANTAGES OF THE INVENTION

Page 4, please replace paragraph [0010] with the following amended paragraph:

[0010] ~~Drawing~~ **BRIEF DESCRIPTION OF THE DRAWINGS**

Please replace paragraph [0011] with the following amended paragraph:

[0011] The invention is described in further detail below in conjunction with the ~~drawing~~

drawings, in which:

Please delete paragraph [0012].

Please replace paragraph [0015] with the following amended paragraph:

[0021] ~~Variant Embodiments~~

DESCRIPTION OF THE PREFERRED EMBODIMENTS

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Page 5, please replace paragraph [0018] with the following amended paragraph:

[0018] The piezoelectric actuator 2 includes a number of piezoelectric crystals, layered one above the other and oriented in stack form, which when current is supplied to the piezoelectric actuator 2 via electrical terminals 10 change their length, so that the piezoelectric actuator 2 causes a reciprocating motion of a booster piston [[5]] 15 directly connected to it.

Please replace paragraph [0019] with the following amended paragraph:

[0019] In [[the]] it's upper region of the piezoelectric actuator 2, the piezoelectric actuator 2 is sealed off at the actuator base 6 by a metal threaded part 8. Located below the metal threaded part 8 is a sealing edge 9, which is embodied with the sealing edge diameter 17 (d_2). The sealing edge 9 embodied on the piezoelectric actuator 2 rests on a suitably beveled conical face of the housing 27 of the fuel injector 1. The piezoelectric crystal stack, not shown in Fig. 1, may optionally be surrounded by a potting material 11, in order to improve the resistance of the piezoelectric actuator 2 to fuel.

Page 6, please replace paragraph [0021] with the following amended paragraph:

[0021] The lower face end 18, pointing toward a hydraulic coupling chamber 19, of the booster piston 15 acts upon a fuel volume contained in the hydraulic coupling chamber 19. The hydraulic coupling chamber 19 is defined on the other end by an end face 21 of an injection valve member 20 embodied in the form of a needle. The diameter of the face end 18 is equivalent to the diameter 16(d₁) of the booster piston [[16]] 15 and is greater than the diameter 17(d₂) of the face end 21 of the needle-like injection valve member 20 that is

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received movably in the vertical direction in the injector body 27. The injection valve member 20 is received in a guide length 28 in the injector body 27.

Please replace paragraph [0022] with the following paragraph:

[0022] From the hollow chamber 4, into which the fuel volume 5 flows via the high-pressure inlet 3, a nozzle chamber inlet 22 branches off. Via the nozzle chamber inlet 22, fuel at system pressure flows to a nozzle chamber 23 embodied in the injector body 27. On the injection valve member 20, a pressure step 24 is embodied, which is engaged by the fuel flowing into the nozzle chamber 23 at system pressure, and at the pressure step 24, ~~the injection valve member 20 generates a force **is generated** that actuates the injection valve member 20 in the opening direction.~~ From the nozzle chamber 23, an annular gap 25 also extends, by way of which fuel flows in the direction of a tip 26 of the injection valve member 20, which can be embodied as a nozzle needle.

Page 8, please add the following new paragraph after paragraph [0028]:

[0029] The foregoing relates to a preferred exemplary embodiment of the invention, it being understood that other variants and embodiments thereof are possible within the spirit and scope of the invention, the latter being defined by the appended claims.

Please delete pages 10 and 11.